

# Installation of Temperature Relative Humidity Probe (Miller-Nelson Atmosphere Generator HCS)

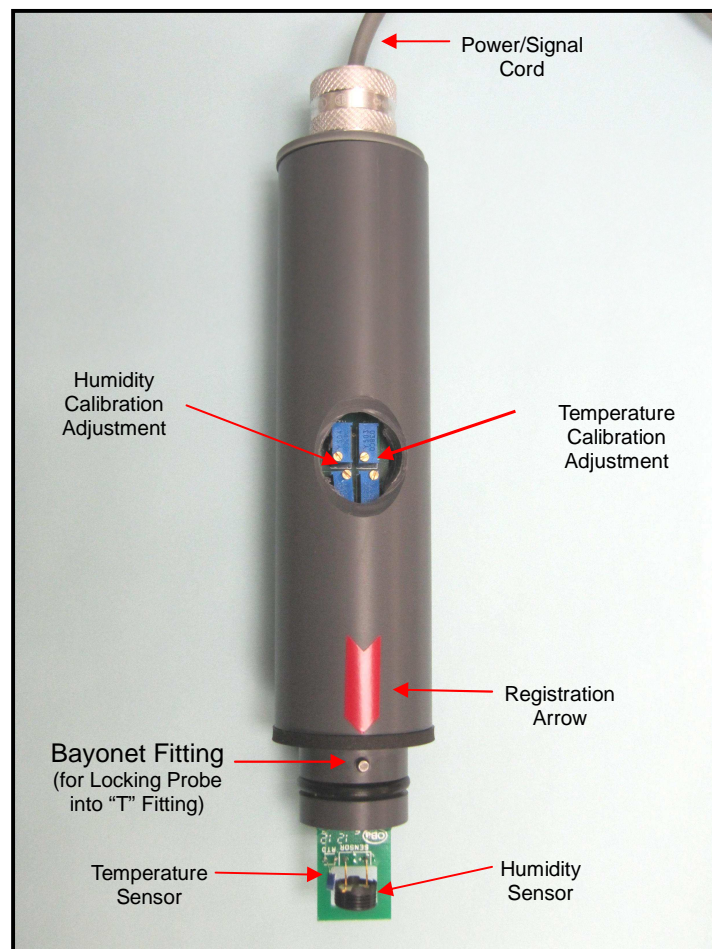
## 1. Description

1.1 The Temperature Relative Humidity Probe (TRH Probe) for the Miller-Nelson Instrument consists of temperature and humidity sensors and a controlling circuit board encased in a gray, cylindrical plastic package.

1.2 The TRH Probe package is 1.5" in diameter and 8.25" in length.

1.3 Separate temperature and humidity sensors (framed by a protective collar) extend from the bottom of the TRH Probe so they are directly in the instrument flow path when the Probe is installed.

1.4 The wire harness entering at the top of the TRH Probe contains wiring for providing power to the circuit board as well as wiring to convey temperature and humidity outputs back to the main instrument control board.



**Fig. 1**

## 2. Principle of Operation

2.1 The dual sensors in the TRH Probe sense and report temperature and relative humidity signals to the Miller-Nelson HCS Instrument for display and to provide feedback for the continuous adjustment of temperature and relative humidity by the main instrument to conform to the temperature and humidity set points.

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### 3. Installation

3.1 Remove the TRH Probe from its plastic bag. Cut and remove the plastic tie on the power/signal cord.

3.2 Slide the protective plastic sleeve (Fig. 2) from the TRH Probe, exposing the temperature and humidity sensors. Inspect the sensors to confirm that they are intact and not damaged.

3.3 Locate the gray plastic "T" fitting that will allow installation of the TRH Probe into the flow path of the Miller-Nelson HCS Instrument. It may be in one of two places:

3.3.1 Already mounted on the Miller-Nelson Instrument

3.3.2 Included in the package with the TRH Probe

3.4 Locate a red arrow on the side of the TRH Probe and a matching red arrow on the side of the gray plastic "T" fitting. (NOTE: if you cannot locate a gray plastic "T" fitting with a red arrow on the side, contact Customer Service at 1-800-833-1258.)

3.5 Carefully slide the TRH Probe into the gray plastic "T" fitting such that the red arrow on the TRH Probe points directly at the red arrow on the gray plastic "T" fitting. Continue sliding until the steel bayonet fitting (Fig. 3) disappears into the "T" fitting, and the rubber gasket is flush with the red arrows on the TRH Probe and "T" fitting, respectively (Fig.4).

3.6 To lock the Probe in place, twist the Probe so that the red arrows are slightly offset (Fig.5)



**Fig.2**



**Fig.3**



**Fig.4**



**Fig.5**

### 4. Calibration and Maintenance

4.1 Please refer to the Operating Manual for the Miller-Nelson HCS-501 or HCS-401, Sections 5 and 6, located at [www.assaytech.us/op\\_manual\\_hcs\\_501.pdf](http://www.assaytech.us/op_manual_hcs_501.pdf) or [www.assaytech.us/op\\_manual\\_hcs\\_401.pdf](http://www.assaytech.us/op_manual_hcs_401.pdf)